

Restoring the Grasslands of the World through Critical Thinking



Grassland Stats

- Total land surface area—15 billion ha
- **1/3** is rangelands, savannas, and prairies—**the grasslands of the world**, and the focus of our work.
 - A 1% increase in SOM over 5 billion ha grasslands = 135 gigatons of C, or...
 - A decrease of 67.5 ppm of atmospheric CO₂
 - Atmospheric CO₂ currently at 390
 - <350 for an Earth as we know it



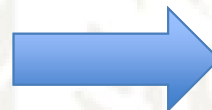
Key Insights

Brittleness

Predator-Prey

Holism

COMPLEXITY



BIOLOGICAL MONITORING DATA - BASIC

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SIMPLICITY

Holistic Framework Promotes Critical Thinking For Triple Bottom Line Results

- Ecologically
 - Healthy Ecosystem Processes.
 - Optimization of biodiversity, water capture and retention, solar energy flow, mineral cycling. Carbon and Water Sink.



Holistic Framework promotes Critical Thinking For Triple Bottom Line Results

- Economically
 - Sustained Profitability
 - Ever-improving capital base
 - Low Cost Production Models



Holistic Framework Promotes Critical Thinking For Triple Bottom Line Results

- Socially
 - Do our chosen enterprises lead to our desired quality of life?
 - Are we creating opportunities for our children to stay involved in our businesses?
 - Are our communities healthy and thriving with diverse economies?



Global Case Studies

The Restorative Power of Critical Thinking



- Colorado



- Montana



- Australia

Colorado



Before Holistic Decision Making

- Riparian areas and high meadows degraded and overgrazed
- Slopes degraded and over-rested
- Simplified plant community
- Wildlife scarce
- Breakeven financial situation





Through Holistic Decision Making

- Now minimizing overgrazing and over-rest – functional ecosystem processes.
- Increased stocking rate by 50% on family ranch, and 300-400% on leased ranch, all with custom grazed cattle
- Only tapping window of summer abundance (no wintering)
- Now solidly profitable







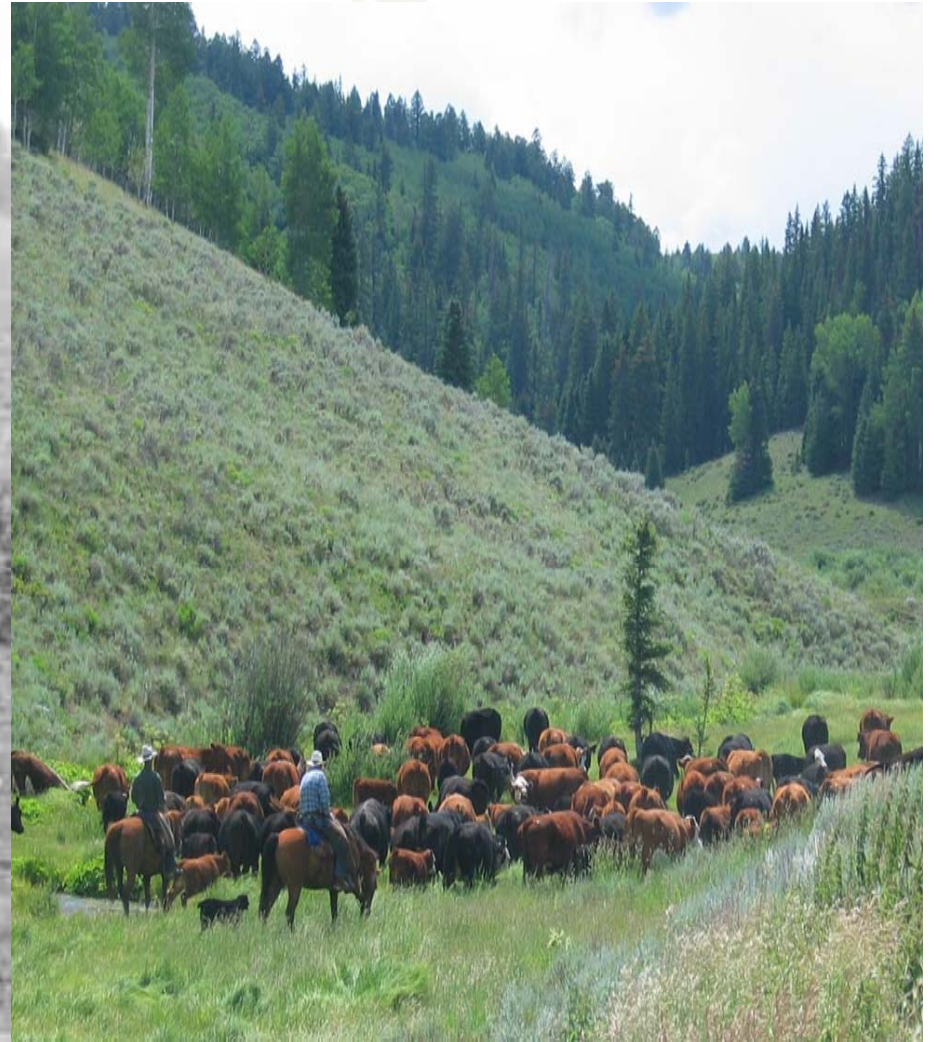
Biological Monitoring Results

Summary since 1997

	Initial Readings-'97	Fall 2004	Fall 2008
Bare Ground	20	10	7
Litter/Plant Base	79	89	93
Dist. To Nearest Perennial	.95"	.85"	.67"

- Stocking Rates 50% higher than under continuous grazing, with much of ranch ungrazed in any given year
- 400% higher than adjacent federal land permits
- All happened under drought conditions

SAME VARIABLES – DIFFERENT THINKING



Montana



Before Holistic Decision Making

- Severe lack of spring and fall grazing—due to calving date, and logistics of branding
- Massive amount of haymaking (fossil fuel based)
- Underappreciated, and underutilized winter grazing potential
- Grossly underutilized summer country



Montana Grass Wintering

Jan. 1 - Feb. 25 – 100% grazing

Feb. 26 – May 1 – 9 lb./day hay, so 572 lb. per head for whole winter

Traditionally, 25 lb./day fed for 120 days

For this herd of 950 head = 1,425 tons

@ \$85/ton, saved \$121,125





Through Holistic Decision Making

- Shifted calving season to June—now calve in summer country. Happy people, happy cows.
- Amalgamated herds, increasing stock density and grazing utilization, leading to effective Ecosystem Processes, more efficient forage harvest across entire ranch.
- Figured out how to winter graze—changing cattle and human culture
- More critical thinking needed to reach even greater balance





Australia

Before Holistic Decision Making

- Many herds (not mimicking Nature)
- Excessive labor and direct inputs (financially unsustainable)
- Hated sheep business (people unhappy)
- Land reverted to nearly 100% annuals (biodiversity loss)
- Marginally profitable





Through Holistic Decision Making

- Transitioned to cattle, amalgamated herds, became experts in holistic planned grazing
- Greatly Reduced Expenses
 - 1.5 full time labor units (3,000 cows, 2,500 yearlings)
 - No mineral, salt, antibiotics, vaccines, wormers, fly control, fertilizers, herbicides, or pesticides
 - Owns no tractors, big pick-ups, or machinery of any kind, except 2 motorcycles
- Perennial grasses are coming back
- Soil is 100% covered
- In southeast Australia's recent severe drought, didn't have to destock, unlike nearly 100% of the ranchers in district
- Now abundantly profitable

No Recipes! Critical Thinking

- Holistic Decision Making and its Planning Procedures engage human thinking in a continual process of adjustment that embrace the unique characteristics of their specific “whole” under management
- Holistically grounded critical thinking results in balance, and balance results in resilience



Critical Thinking through Holistic Decision Making
To Restore the Grasslands of the World and
Address Pressing Current Global Trends





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